Work Order Thursday, June 26,			*121	1592*				Page	1
Item ID: D3 Revision ID: Item Name: Rin	3407-5		Accept	*N900	04010	N *	Setup Start Stop	*NS1*	
	26/14 Start Qty: 12.00	*12* *12*	0	Cust Item l Customer:	ID:			"IV.>"	
Approvals: Pr	rocess Plan: MLS	Date: 14-00-30	Tooling:	Da	ate:	I	Run Start	*NR1*	
Q	C:	Date:	SPC (Y/N):	D:	ate:		Stop	*NR2*	
Sequence ID/ Work Center ID	Operation Description	• .	Set Up/ Run Hours	Tool ID	Tool # Plan Code	Accept Qty		Reject Insp. Number Stamp	
Draw Nbr	Revision Nbr	- Ayage							-
D3407	Rev E								
*100 *100* Waterjet FLOW CNC Waterjet	Dwg Rev: Prog Rev:	Dwg D3407	0.00 0.00 3407 (175rpm)		`\	[0			DAS 23 9-89/4-0
110	QC2- Inspect parts off m	achine FAI/FAIB	0.00		4 **	`		,	DAS

0.00

Memo

110

Quality Control

DQA:			Date:						_					"DART
						WORK ORDER NON-	-C(ONFO	RMANCE / UPI					AEROSPACE
QA Closed:			Date:				,	ŗ		W	ork Order up	date only		
Work Ord	ar.					DISPOSITION				AGAINST DI	EPARTMENT	/PROCESS		
WOIK OIU	٠٠.	 			_	Rework	ıl		Skid-tube	Crosstube	7	Water Jet		Engineering
Part I	No.					Scrap			Machining	Small Fab	⊣	d. Eng. Coor.		Quality
NCR I	No.					Use-as-is Suspected Unapproved		Thern	noforming Large Fab	Finishing Composite	Rec/Stor	e/Packaging Supplier		Other
Root					Desc	ription of work order update	1	nitial	Actio	n	Sign &			
Cause	ļ	Date	Step	Qty		or non-conformance	Ch	ief Eng	Descrip	otion	Date	Verification	n	QC Inspector
Design														
Doc/Data													1	
Equip/Tooling	Ш												- 1	
Handling/Pre	Ш								į					
Material	Ш													
Operator														
Offset/Setup	Ш			i i										
Process	Ш													
Supplier	Ш													
Training														
Transport									1					
Unapproved				<u> </u>										
							FAI	ULT CA	TEGORY					·
- Landi	ng G	Gear			r—	General	_	1 .		_	7	г	_	
•		Bending			<u> </u>	Bend	_	1 .	Program		Outside Dim	ŀ	-	Pressure/Forced
	\vdash	Centre No	ot Concer	ntric		BOM/Route		Grain		_	Over/Under	l l	_	Set-up
	Ш	Cracks			<u> </u>	Broken/Damage/Defect	<u> </u>	Hardwa			Part Incorred	ŀ	$\overline{}$	Temperature/Cure
		Crimp/Kii	nk/Ripple	/Wave	_	Burrs		1 '	ion Incomplete/Unq		Part Lost/Mi	ssing	-	Weld
		Cuffs				Contamination	<u> </u>	4	tions Incomplete/Un	ıclear	Part Moved			Wrong Stock Pulled
		Crushing				Countersink		•	gned/off center	<u> </u>	Positioned V		—	
	$\overline{}$	Heat Trea			_	Cut Too Short	<u> </u>	Mislabe			Power Loss/	Surge		Other
	-	Inspectio	-	Tube	<u> </u>	Drawing		Misrea						
		Marks/Cl	natter		<u> </u>	Drill Holes	$oxed{}$	Off-set						-
		Turning S	Sequence			Finish	<u>_</u>	4	Calibration					
		Wave/Tw	vist in Tub	e		Fit/Function		Out of	Sequence					

Work Ord Thursday, June				*12						Page 2		
Item ID: Revision ID: Item Name: Start Date: Required Date: Reference:	D3407-5 Ring 6/26/14 6/26/14	Start Qty: 12.00 Req'd Qty: 12.00	*1 <i>2</i> * *1 <i>2</i> *		*N900 Cust Item I		10	n*	Setup	Start Stop	*N *N	S1* S2*
Approvals:		Plan:	Date:	Tooling: SPC (Y/N):		ate:		1		Start Stop		R1* R2*
Sequence ID/ Work Center II 120 *1 20* QC Quality Control	D	Operation Description QC8- Inspect parts - secon	nd check	Set Up/ Run Hours 0.00	Tool ID	Tool#	Plan Code	Accept Qty	Rejec Qty		Reject Number	Insp. Stamp DAS 38 9-89
120 Packaging Packaging		Identify as per dwg & Sto Memo *****STOCE	ck Location: WAX	0.00				_/6	_E	Z_/3	41-6	

0.00

0.00

140

140

Quality Control

QC21- Final Inspection - Work Order Release

Memo

14/11/10/

Mu-11-06

DQA:		Date:			MODIC ORDER MON	~		DAAANCE / LIDDAT	·c			"DART
QA Closed:		Date:			WORK ORDER NON-	-((JNFUI	RIVIANCE / UPDAT		ork Order up	date only	AEROSPACE
					DISPOSITION			AG	AINST DE	PARTMENT/	PROCESS	
Work Orde	r:					.				İ	Water let	
0					Rework		1	⊢	sstube all Fab	Prov	Water Jet d. Eng. Coor.	Engineering Quality
Part N	0				Scrap Use-as-is			Ÿ 	nishing		e/Packaging	Other
NCR N	0.				Suspected Unapproved			~ 	posite	11.00,0101	Supplier	1 1
						,					, 	
Root				Desci	ription of work order update	i	nitial	Action		Sign &		
Cause	Date	Step	Qty		or non-conformance	Ch	ief Eng	Description		Date	Verification	QC Inspector
Design			:									
Doc/Data												
Equip/Tooling						ļ						
Handling/Pre	_	Į										
Material												
Operator	_											
Offset/Setup	_											
Process	_							:				
Supplier	_											
Training												
Transport	_					1						
Unapproved		<u> </u>	<u> </u>			<u> </u>						
						FAI	ULT CAT	TEGORY		·		
Landir r	ng Gear			_	General		le /5			Outside Dime	: <u> </u>	Pressure/Forced
	Bending			ļ	Bend		1	rogram		Over/Under		Set-up
	Centre N	ot Conce	ntric		BOM/Route	_	Grain		-	Part Incorrec		Temperature/Cure
· }	Cracks	1 /5: 1	4		Broken/Damage/Defect	<u> </u>	Hardwa		_	Part Lost/Mi	├	Weld
	Crimp/Ki	nk/Ripple	e/Wave	_	Burrs	⊢	4 '	on Incomplete/Unqualifie	_	Part Lost/Mil	- Sille	Wrong Stock Pulled
	Cuffs			_	Contamination	-	4	ions Incomplete/Unclear		Positioned W	/rong	
}	Crushing			-	Countersink	 	Mislabe	ned/off center	}	Power Loss/S		Other
	Heat Trea		T l	\vdash	Cut Too Short	\vdash	Misread		L_	prower Loss/.	Juige [Other
	Inspectio		iupe	-	Drawing Drill Holos	\vdash	Off-set	ı				
	Marks/Ch			\vdash	Drill Holes	\vdash	4	Calibration				
	Turning S	•		<u> </u>	Finish	\vdash	4					
	Wave/Tw	vist in Tul	be		Fit/Function		Jour or s	Sequence				

Picklist Print

Thursday, June 26, 2014 3:04:02 PM

Work Order ID: 121592

121592

Parent Item:

D3407-5

D3407-5

Parent Item Name: Ring

Start Date: 6/26/14

Required Date: 6/26/14

Page 1

Start Qty: 12.00

Required Qty: 12.00

Comments:

IPP Rev:A New Issue 05-11-22 JLM

IPP Rev:B Now on Waterjet 08-05-14 JLM Verified By:DD

IPP Rev:C 08-08-12 revE as per dwg (ecn 08-507) DD verified by:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Primar Item Locatio	 Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M174B0.250X4.000		Purchased	No	100	f	32.4700	0.2666	3,3 6757 9)	DAS	3
*M174R0	250X4 () ///					**	(4)		23 9-80	411

17-4 SS Bar .250 X 4.00

Location	Loc Qty	Loc Code	
MAT049	32.47		
m127583	8.5		
m127866	23.97		127866.

DQA:			_ Date: _							ND 4 TF			•	"DART
QA Closed:			Date:			WORK ORDER NON-	-CC	ONFO	RMANCE / UF		Vork Order up	odate only	ユ	AEROSPACE
						DISPOSITION				AGAINST D	EPARTMENT	/PROCESS		
Work Orde	er: _									r				e
						Rework			Skid-tube	Crosstube		Water Jet	\dashv	Engineering
Part N	10.					Scrap			Machining	Small Fab	_	d. Eng. Coor. re/Packaging	\dashv	Quality Other
NICD N	ما					Use-as-is Suspected Unapproved			noforming Large Fab	Finishing Composite	- Rec/stol	Supplier	\dashv	
NCR N	۱O. <u>-</u>					Suspected Onapproved	!		Large rab	Composite		ouppner [•
Root					Desc	ription of work order update	1	nitial	Acti	on	Sign &			
Cause		Date	Step	Qty		or non-conformance	Ch	ief Eng	Descri	iption	Date	Verification	1	QC Inspector
Design														
Doc/Data														
Equip/Tooling														
Handling/Pre														
Material					Ì									
Operator														
Offset/Setup														
Process														
Supplier														
Training														
Transport	Щ													
Unapproved							<u> </u>					<u> </u>		·
							FA	ULT CAT	regory				—	
Landi		1				General		1501:0/0	lua aua m	Г	Outside Dim	onsions [\neg	ressure/Forced
		Bending			ļ	Bend BOM/Bouto		Grain	rogram	-	Over/Under	<u> </u>		et-up
	_	i	ot Concer	itric	-	BOM/Route		Hardwa		-	Part Incorre		_	emperature/Cure
		Cracks	nlı/Dinnla	Malassa	\vdash	Broken/Damage/Defect	┝	4	ire ion Incomplete/Un	aualified	Part Lost/Mi	-	_	Veld
		Crimp/Kii Cuffs	nk/Ripple	, vv ave	<u> </u>	Burrs Contamination	\vdash	4 '	ion incomplete/on	· —	Part Moved		_	Vrong Stock Pulled
	-	1			\vdash	Countersink	-	4	ned/off center	l l	Positioned V	L Vrong	┛`	Trong Stock runeu
		Crushing Heat Trea			-	Cut Too Short	\vdash	Mislabe		 -	Power Loss/		\neg_{c}	Other
	\vdash	Inspectio		Tube	-	Drawing	-	Misread		L		L		
		Marks/Cl	•	iube	\vdash	Drill Holes	 	Off-set			<u> </u>			
	<u> </u>	1	Sequence		 	Finish	\vdash	4	Calibration					
	-	1 -	vist in Tuk			Fit/Function		4	Sequence					
1	1	1 4 4 4 6 / 1 4	iu	<i>-</i> -		14	<u></u>	1						

DART AEROSPACE LTD	Work Order: 17	1592
Description: Tow Ring	Part Number:	D3407-5
Inspection Dwg: D3407 Rev: E		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

X	First Article	Prototype
---	---------------	-----------

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
0.250	+/-0.010	0 260"	_		V	J4moi
Ø3.000	+/-0.030	3.004	_		J	
Ø2.050	+0.012/-0.001	2050-	. —		V	
0.75	+/-0.030	0.75"	_		J	
				,		
						·
					-	·
			DA:	<u> </u>		

Measured by:	DAS 23	Audited by:	38 9-89	Prototype Approval:	N/A
Date:	14-10-16	Date:	OCT 2 0 2014	Date:	N/A

Rev	Date	Change	Revised by	Approved
Α	07.02.02	New Issue	KJ/JLM	
В	07.09.18	Tolerance revised	KJ/EC	
С	08.05.14	Dimensions updated per Dwg Rev D	KJ/JLM	11
D	09.05.04	Dwg Rev updated	KJ/DD 😾	6/11

8 Æ QTY -045 QTY QTY -043 PART NUMBER DESCRIPTION -041 X D3407-041 TOW RING D3407-043 **TOW RING** D3407-045 **TOW RING** D3407-1 STEM D3407-3 STEM D3407-5 RING D3407-7 STEM -D3407-5 RING -D3407-5 RING SHOP COPY -D3407-5 RING RETURN TO **ENGINEERING UNCONTROLLED COPY** С 8 SUBJECT TO AMENDMENT WITHOUT NOTICE 8 WORK ORDER NO 171592 MCS 8 1/8 14-0630 -D3407-1 STEM [6] D3407-3 STEM D3407-7 STEM **D3407-041 TOW RING D3407-043 TOW RING D3407-045 TOW RING** ADD D3407-045 (ZN B2-1, D8-1); ADD D3407-7 (ZN B6-5); REVISED NOTE 6 TO ADD IDENTIFICATION (ZN A5-1); REASON: PRODUCTION FACILITY 08.07.23 D3407-1/-3 SLOT WAS ROUND NOW FLAT FOR ASSEMBLY WITH D3407-5 (ZN C2-2, C2-3); D3407-5 WAS ROUND NOW FLAT ON ONE END FOR ASSEMBLY WITH D3407-1/-3 (ZN B6-4); REASON: PRODUCTION FACILITY 08.04.07 -1/-3 LONGER FOR FIT W/WASHER С 05.09.09 UPDATE DIAMETER, THREAD CLASS ADDED В CP 05.06.17 NEW ISSUE Α 05.03.16 REV. DESCRIPTION BY DATE DESIGN DART AEROSPACE USA, INC. NOTES: 1) MATERIAL: N/A DRAWN PORT HADLOCK, WA 1) MAI ERIAL: NIA 2) FINISH: POWDER COAT WHITE (4.3.5.2) PER DART QSI 005 4.3 (EXCEPT THREADS) 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED 4) UNITS: INCHES UNLESS OTHERWISE NOTED DRAWING NO. CHECKED REV. E D3407 MFG. APPR SHEET 1 OF 5 5) BREAK SHARP EDGES: N/A APPROVED 3) BILLAIN SHARF EUGES, INVA 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3407-XXX" USING BLACK FINE POINT PERMANENT INK MARKER 7) WEIGHT: D3407-041 - 0.60 lbs, D3407-043 - 0.53 lbs, D3407-045 - 0.61 lbs 8) WELD PER DART QSI 004 ON ALL EDGES BETWEEN STEM AND RING **SCALE**

8

D

5

2

08.07.23

TOW RING

DE APPR.

DATE

COPYRIGHT © 2005 BY DART AEROSPACE USA, INC
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION
NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON

NTS







